

The Raytheon defendants respectfully requests that the Court instruct the jury as follows:

INTRODUCTION

1. You are not to be concerned with the statements made by counsel throughout the trial. These are not evidence unless adopted by a witness on direct or cross-examination. You are not to be concerned with the objections made by counsel throughout the course of the trial during the examination of witnesses, the reading of deposition transcripts, or the introduction of documents. Counsel are obligated to make these objections and you are not to consider them in rendering your verdict. You are also to disregard any evidence which the judge has ordered to be stricken from the record.
2. You cannot be governed by sympathy or prejudice or any motive whatsoever, except a fair and impartial consideration of the evidence, and you must not allow any sympathy you may have for any part to influence you in any degree whatever, in deciding whether the plaintiffs sustained their burden of proof, or in assessing damages.
3. The corporate defendant in this case is entitled to the same fair, unprejudiced treatment by a jury as an individual would be under like circumstances.

CREDIBILITY

4. In deciding how believable the testimony of a witness is, you may consider that the witness has made previous inconsistent statements or conflicting statements. It is not necessary that there should be a contradiction in plain terms. It is enough that the contradictory evidence offered affords some indication that the fact was different from the testimony of the witness whose credibility is questioned.

Zimberg v. United States, 142 F 2d. 132, 136 (1st Cir. 1944);
Commonwealth v. West, 312 Mass. 438, 440 (1942).

5. In determining whether you believe a witness, you may consider the way the witness testifies, including the manner in which the witness answers questions, how well the witness remembers the facts or events on which testimony is offered, and the internal consistency and believability of the witness' version of events.
6. If a witness now remembers something which he has earlier said he forgot, that is an inconsistency which you can consider in deciding whether to believe that witness.

Commonwealth v. Granito, 326 Mass. 494, 500 (1950).

7. If a witness testifies at trial in a manner inconsistent with his earlier statement, you may consider that, not only in deciding whether to believe that statement on which contradiction exists, but also in deciding whether to believe any part of his trial testimony.

BURDEN OF PROOF

8. The burden of proof is on the plaintiffs to prove each and every essential element of their claims by a preponderance of all credible evidence. If the evidence should fail to establish any one of the essential elements of the plaintiffs' claims, or if the evidence is equally balanced as to any of the essential elements of the plaintiffs' claims, then you must find for the defendant.

Milton v. Van Dorn Company, 961 F.2d 965, 969 (1st Cir. 1992);
Borrelli v. Top Value Enterprises, 356 Mass. 110, 113 (1969);
Kenney v. Sears, Roebuck & Co., 355 Mass. 604 (1969).

9. In determining how much weight to give a witness' testimony, you may also consider the witness' interest in the outcome of the case. "[A] person's financial interest in a case will often affect [the witness'] testimony. The testimony of an interested witness should be examined with more care and scrutiny than the testimony of some witness who has no financial interest or any other interest in this case."

Hathaway v. Checker Taxi Co., 321 Mass. 406, 409 (1947).

10. If you find that a witness is a friend of the plaintiff in this case, or if a witness is biased toward a party in this case, then you may consider that in deciding how believable the witness is.

Liacos, Handbook of Massachusetts Evidence, 144 (1981).

11. The weight or preponderance of evidence is its power to convince you of the actual truth of the proposition to be proved. After the evidence has been weighed, that proposition is proved by a preponderance of the evidence if it is made to appear more likely or probably in the sense that actual belief in its truth, derived from the evidence, exists in your minds notwithstanding any doubts which may still linger there.

Stepakoff v. Kantar, 393 Mass. 836, 842-43 (1985).

12. The plaintiffs have the burden of proving by a preponderance of all the credible evidence not only that defendant was negligent or breached a warranty, but that the plaintiffs were injured as a direct and proximate result of this negligence or breach of warranty.

Maher v. General Motors Corporation, 370 Mass. 231, 233-34 (1976);
McNeill v. American Cyanamid Company, 3 Mass. App. 738 (1975);
Smith v. Ariens Co., 375 Mass. 620, 626 (1978);
Aholm v. Town of Wareham, 371 Mass. 621, 626 (1976).

13. Mere proof of injury to the plaintiffs is not evidence of negligence or breach of warranty on the part of the defendant.

Borysewicz v. Dineen, 302 Mass. 461, 464 (1939);
Tallon v. Spellman, 302 Mass. 179, 183-84(1939).

14. The plaintiffs fail to maintain the burden of proof if, on all of the credible evidence, the question of proof is left to conjecture, surmise or speculation.

Bigwood v. Boston & Northern Street Railway, 209 Mass. 345, 348 (1911);
Morris v. Weene, 258 Mass. 178, 180, 154 N.E. 860 (1927);
Currie v. Lee Equipment Corp., 362 Mass. 765, 768, 291 N.E.2d 403, 406 (1973).

15. It is not enough for the plaintiffs to prove that the accident might have -- or could have -- resulted from negligence or the breach of warranty of the defendant Raytheon. The plaintiffs must show that it is more likely than not that it did. If you find that the accident was not caused negligence or by breach of warranty on the part of Raytheon, then you must return a verdict in the defendants' favor.

Coyne v. John S. Tilley Co., 368 Mass. 230, 237, 331 N.E.2d 541, 546 (1975);
LeBlanc v. Ford Motor Company, 346 Mass. 225, 230-31, 191 N.E.2d 301, 305 (1963);
Smith v. Ariens Co., 375 Mass. 620, 626, 377 N.E.2d 954, 958 (1978);
Kenney v. Sears, Roebuck & Co., 355 Mass. 604, 608, 246 N.E.2d 649, 652 (1969);
Wiska v. St. Stanislaus Social Club, Inc., 7 Mass. App. 813, 821, 390 N.E.2d 1133, 1138 (1979).

16. The plaintiffs are bound to introduce enough credible evidence to remove the cause of their injuries from the realm of speculation. In this case, mere speculation as to the cause of the injuries is not sufficient to allow you to render a verdict against the defendant.

Mucha v. Northeastern Crushed Stone Co., 307 Mass. 592, 596-97, 30 N.E.2d 870, 872 (1940);
Wardwell v. Taylor, 333 Mass. 302, 304-05, 130 N.E.2d 586, 588 (1955);
Dolan v. Suffolk-Franklin Savings Bank, 355 Mass. 665, 669-70, 246 N.E.2d 798, 801 (1969);
Kenney v. Sears, Roebuck & Co., 355 Mass. 604, 608, 246 N.E.2d 649, 652-53 (1973).

EXPERT WITNESS TESTIMONY

17. There is no obligation for you to believe an expert witness merely because he is an expert witness. You are free to reject his testimony in whole or in part if you are not satisfied that it is based upon the facts of the case as you find them to be, if you find that he does not have a sufficient basis upon which to support his opinion, if you find that he has not had a sufficient opportunity to observe that which he purports to have observed, or if you find that his opinion is motivated by his or her interest in the case.

18. A verdict may not be based on conjecture or surmise, and expert opinion is not beneficial if it is demonstrated that it rests on speculation.

Payton v. Abbott Labs, 780 F.2d 147, 156 (1st Cir. 1985);
Swartz v. General Motors Corporation, 375 Mass. 628, 633, 378 N.E.2d 61, 65 (1978).

19. Opinion evidence which is based upon an assumption of facts not proven or which contradicts physical facts must be disregarded, and the jury is not permitted to give credit to such testimony.

20. Opinion evidence which amounts to a guess or a mere assertion of a possibility should be disregarded by the jury.

Look's Case, 345 Mass. 112, 115-16, 185 N.E.2d 626, 628 (1962);
Oberlander's Case, 348 Mass. 1, 5-6, 200 N.E.2d 268, 271 (1964).

21. A mere guess or conjecture by an expert witness in the form of a conclusion from basic facts that do not tend toward that conclusion any more than a contrary one has no evidential value.

Damon v. Sun Company, Inc., 87 F.3d 1467, 1474 (1st Cir. 1996);
Kennedy v. U-Haul Co., 360 Mass. 71, 73-74, 271 N.E.2d 346, 348 (1971);
Ruschetti's Case, 299 Mass. 426, 431-32, 13 N.E.2d 34, 37 (1938).

22. An expert may have an opinion that is nothing more than mere intuition or conjecture, and such an opinion has no probative value.

Drexel v. Order of United Commercial Travelers, 173 Wis. 173, 178-179, cited in Ruschetti's Case, 299 Mass. 426, 431, 13 N.E.2d 34 (1938).

23. If you disagree with the factual basis for an expert's opinion, you may reject that expert's opinion. You as the jury are the ultimate finder of fact with respect to this incident.

Reil v. Lowell Gas Co., 353 Mass. 120, 133 (1967).

24. The jury, in finding the cause of the plaintiffs' injury, can only reach conclusions upon facts which have been proven, and by rational inferences drawn from those proven facts.

Gates v. Boston and Maine Railroad, 255 Mass. 297, 303-04, 151 N.E.2d 320, 322 (1926);
Zezuki v. Jenny Mfg. Co., 363 Mass. 324, 329-30, 293 N.E.2d 875, 879 (1973).

25. "Experts can be found to testify to anything." Therefore, there is no obligation for you to believe an expert witness merely because he is an expert witness. You are free to reject his or her testimony in whole or in part if you are not satisfied that it is based upon the facts of the case as you find them to be, if you find that he or she does not have a sufficient basis upon which to support his or her opinion, if you find that he or she has

not had a sufficient opportunity to observe that which he or she purports to have observed, or if you find that his or her opinion is motivated by his or her financial interest in the case.

MacQuarrie v. Howard Johnson, No. 84-3375-WD-A, slip op., at 10 (D.Mass. Apr. 29, 1988);

Swartz v. Gen. Motors, 375 Mass. 628, 632-33, 378 N.E.2d 61, 65 (1978).

SOPHISTICATED USER

26. Application of the sophisticated user defense turns on the end user's level of sophistication.

Carrel v. Nat'l Cord & Braid Corp., 447 Mass. 431, 2006 WL 2337595 (2006) (citing Hoffman v. Houghton Chem. Corp., 434 Mass. 624, 751 N.E. 2d 848 (2001)). See e.g., First Nat'l Bank & Trust Corp. v. American Eurocopter Corp., 378 F.3d 682 (7th Cir. 2004) (helicopter manufacturer granted summary judgment because professional pilots were sophisticated users/intermediaries); Emory v. McDonnell Douglas Corp., 148 F.3d 347 (4th Cir. 1998) (aircraft manufacturer granted summary judgment because the Navy and its pilots were sophisticated users); In re Air Crash Disaster v. Northwest Airlines, Inc., 86 F.3d 498 (6th Cir. 1996) (jury instruction which allowed jury to consider commercial airline's level of sophistication for manufacturer's sophisticated user defense upheld); Johnston v. Hartford Ins. Co., 623 So. 2d 35 (La. App. Ct. 1993) (mechanics were sophisticated users); Ramsey v. Bell Helicopter Textron, 717 F. Supp. 1178 (E.D. La. 1989) (pilots were sophisticated users who were required to use visual inspections and pre-flight checks and procedures to ensure aircraft properly functioned).

14 CFR § 43.3

- (a) Except as provided in this section and Sec. 43.17, no person may maintain, rebuild, alter, or perform preventive maintenance on an aircraft, airframe, aircraft engine, propeller, appliance, or component part to which this part applies. Those items, the performance of which is a major alteration, a major repair, or preventive maintenance, are listed in appendix A.
- (b) The holder of a mechanic certificate may perform maintenance, preventive maintenance, and alterations as provided in Part 65 of this chapter.
- (c) The holder of a repairman certificate may perform maintenance, preventive maintenance, and alterations as provided in part 65 of this chapter.
- (d) A person working under the supervision of a holder of a mechanic or repairman certificate may perform the maintenance, preventive maintenance, and alterations that his supervisor is authorized to perform, if the supervisor personally observes the work being done to the extent necessary to ensure that it is being done properly and if the supervisor is readily available, in person, for consultation. However, this paragraph does not authorize the performance of any inspection

required by Part 91 or Part 125 of this chapter or any inspection performed after a major repair or alteration.

- (e) The holder of a repair station certificate may perform maintenance, preventive maintenance, and alterations as provided in Part 145 of this chapter.
- (f) The holder of an air carrier operating certificate or an operating certificate issued under Part 121 or 135, may perform maintenance, preventive maintenance, and alterations as provided in Part 121 or 135.
- (g) Except for holders of a sport pilot certificate, the holder of a pilot certificate issued under part 61 may perform preventive maintenance on any aircraft owned or operated by that pilot which is not used under part 121, 129, or 135 of this chapter. The holder of a sport pilot certificate may perform preventive maintenance on an aircraft owned or operated by that pilot and issued a special airworthiness certificate in the light-sport category.
- (h) Notwithstanding the provisions of paragraph (g) of this section, the Administrator may approve a certificate holder under Part 135 of this chapter, operating rotorcraft in a remote area, to allow a pilot to perform specific preventive maintenance items provided--
 - (1) The items of preventive maintenance are a result of a known or suspected mechanical difficulty or malfunction that occurred en route to or in a remote area;
 - (2) The pilot has satisfactorily completed an approved training program and is authorized in writing by the certificate holder for each item of preventive maintenance that the pilot is authorized to perform;
 - (3) There is no certificated mechanic available to perform preventive maintenance;
 - (4) The certificate holder has procedures to evaluate the accomplishment of a preventive maintenance item that requires a decision concerning the airworthiness of the rotorcraft; and
 - (5) The items of preventive maintenance authorized by this section are those listed in paragraph (c) of appendix A of this part.
- (i) Notwithstanding the provisions of paragraph (g) of this section, in accordance with an approval issued to the holder of a certificate issued under part 135 of this chapter, a pilot of an aircraft type-certificated for 9 or fewer passenger seats, excluding any pilot seat, may perform the removal and reinstallation of approved aircraft cabin seats, approved cabin-mounted stretchers, and when no tools are required, approved cabin-mounted medical oxygen bottles, provided--

- (1) The pilot has satisfactorily completed an approved training program and is authorized in writing by the certificate holder to perform each task; and
- (2) The certificate holder has written procedures available to the pilot to evaluate the accomplishment of the task.

(j) A manufacturer may--

- (1) Rebuild or alter any aircraft, aircraft engine, propeller, or appliance manufactured by him under a type or production certificate;
- (2) Rebuild or alter any appliance or part of aircraft, aircraft engines, propellers, or appliances manufactured by him under a Technical Standard Order Authorization, an FAA-Parts Manufacturer Approval, or Product and Process Specification issued by the Administrator; and
- (3) Perform any inspection required by Part 91 or Part 125 of this chapter on aircraft it manufactures, while currently operating under a production certificate or under a currently approved production inspection system for such aircraft.

14 CFR 43.5

No person may approve for return to service any aircraft, airframe, aircraft engine, propeller, or appliance, that has undergone maintenance, preventive maintenance, rebuilding, or alteration unless--

- (a) The maintenance record entry required by Sec. 43.9 or Sec. 43.11, as appropriate, has been made;
- (b) The repair or alteration form authorized by or furnished by the Administrator has been executed in a manner prescribed by the Administrator; and
- (c) If a repair or an alteration results in any change in the aircraft operating limitations or flight data contained in the approved aircraft flight manual, those operating limitations or flight data are appropriately revised and set forth as prescribed in Sec. 91.9 of this chapter.

14 CFR § 43.13

- (a) Each person performing maintenance, alteration, or preventive maintenance on an aircraft, engine, propeller, or appliance shall use the methods, techniques, and practices prescribed in the current manufacturer's maintenance manual or Instructions for Continued Airworthiness prepared by its manufacturer, or other methods, techniques, and practices acceptable to the Administrator, except as noted in §43.16. He shall use the tools, equipment, and test apparatus necessary

to assure completion of the work in accordance with accepted industry practices. If special equipment or test apparatus is recommended by the manufacturer involved, he must use that equipment or apparatus or its equivalent acceptable to the Administrator.

- (b) Each person maintaining or altering, or performing preventive maintenance, shall do that work in such a manner and use materials of such a quality, that the condition of the aircraft, airframe, aircraft engine, propeller, or appliance worked on will be at least equal to its original or properly altered condition (with regard to aerodynamic function, structural strength, resistance to vibration and deterioration, and other qualities affecting airworthiness).
- (c) Special provisions for holders of air carrier operating certificates and operating certificates issued under the provisions of Part 121 or 135 and Part 129 operators holding operations specifications. Unless otherwise notified by the administrator, the methods, techniques, and practices contained in the maintenance manual or the maintenance part of the manual of the holder of an air carrier operating certificate or an operating certificate under Part 121 or 135 and Part 129 operators holding operations specifications (that is required by its operating specifications to provide a continuous airworthiness maintenance and inspection program) constitute acceptable means of compliance with this section.

14 CFR 43.15

- (a) General. Each person performing an inspection required by Part 91, 123, 125, or 135 of this chapter, shall--
 - (1) Perform the inspection so as to determine whether the aircraft, or portion(s) thereof under inspection, meets all applicable airworthiness requirements; and
 - (2) If the inspection is one provided for in Part 123, 125, 135, or Sec. 91.409(e) of this chapter, perform the inspection in accordance with the instructions and procedures set forth in the inspection program for the aircraft being inspected.
- (b) Rotorcraft. Each person performing an inspection required by Part 91 on a rotorcraft shall inspect the following systems in accordance with the maintenance manual or Instructions for Continued Airworthiness of the manufacturer concerned:
 - (1) The drive shafts or similar systems.
 - (2) The main rotor transmission gear box for obvious defects.
 - (3) The main rotor and center section (or the equivalent area).
 - (4) The auxiliary rotor on helicopters.

(c) Annual and 100-hour inspections.

(1) Each person performing an annual or 100-hour inspection shall use a checklist while performing the inspection. The checklist may be of the person's own design, one provided by the manufacturer of the equipment being inspected or one obtained from another source. This checklist must include the scope and detail of the items contained in appendix D to this part and paragraph (b) of this section.

(2) Each person approving a reciprocating-engine-powered aircraft for return to service after an annual or 100-hour inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the manufacturer's recommendations of--

(i) Power output (static and idle r.p.m.);

ii) Magnetos;

(iii) Fuel and oil pressure; and

(iv) Cylinder and oil temperature.

(3) Each person approving a turbine-engine-powered aircraft for return to service after an annual, 100-hour, or progressive inspection shall, before that approval, run the aircraft engine or engines to determine satisfactory performance in accordance with the manufacturer's recommendations.

(d) Progressive inspection. (1) Each person performing a progressive inspection shall, at the start of a progressive inspection system, inspect the aircraft completely. After this initial inspection, routine and detailed inspections must be conducted as prescribed in the progressive inspection schedule. Routine inspections consist of visual examination or check of the appliances, the aircraft, and its components and systems, insofar as practicable without disassembly. Detailed inspections consist of a thorough examination of the appliances, the aircraft, and its components and systems, with such disassembly as is necessary. For the purposes of this subparagraph, the overhaul of a component or system is considered to be a detailed inspection.

(2) If the aircraft is away from the station where inspections are normally conducted, an appropriately rated mechanic, a certificated repair station, or the manufacturer of the aircraft may perform inspections in accordance with the procedures and using the forms of the person who would otherwise perform the inspection.

14 CFR § 65.81

(a) A certificated mechanic may perform or supervise the maintenance, preventive maintenance or alteration of an aircraft or appliance, or a part thereof, for which

he is rated (but excluding major repairs to, and major alterations of, propellers, and any repair to, or alteration of, instruments), and may perform additional duties in accordance with Sec. Sec. 65.85, 65.87, and 65.95. However, he may not supervise the maintenance, preventive maintenance, or alteration of, or approve and return to service, any aircraft or appliance, or part thereof, for which he is rated unless he has satisfactorily performed the work concerned at an earlier date. If he has not so performed that work at an earlier date, he may show his ability to do it by performing it to the satisfaction of the Administrator or under the direct supervision of a certificated and appropriately rated mechanic, or a certificated repairman, who has had previous experience in the specific operation concerned.

- (b) A certificated mechanic may not exercise the privileges of his certificate and rating unless he understands the current instructions of the manufacturer, and the maintenance manuals, for the specific operation concerned.

14 CFR § 65.85

- (a) Except as provided in paragraph (b) of this section, a certificated mechanic with an airframe rating may approve and return to service an airframe, or any related part or appliance, after he has performed, supervised, or inspected its maintenance or alteration (excluding major repairs and major alterations). In addition, he may perform the 100-hour inspection required by part 91 of this chapter on an airframe, or any related part or appliance, and approve and return it to service.
- (b) A certificated mechanic with an airframe rating can approve and return to service an airframe, or any related part or appliance, of an aircraft with a special airworthiness certificate in the light-sport category after performing and inspecting a major repair or major alteration for products that are not produced under an FAA approval provided the work was performed in accordance with instructions developed by the manufacturer or a person acceptable to the FAA.

14 CFR § 65.87

- (a) Except as provided in paragraph (b) of this section, a certificated mechanic with a powerplant rating may approve and return to service a powerplant or propeller or any related part or appliance, after he has performed, supervised, or inspected its maintenance or alteration (excluding major repairs and major alterations). In addition, he may perform the 100-hour inspection required by part 91 of this chapter on a powerplant or propeller, or any part thereof, and approve and return it to service.
- (b) A certificated mechanic with a powerplant rating can approve and return to service a powerplant or propeller, or any related part or appliance, of an aircraft with a special airworthiness certificate in the light-sport category after performing and inspecting a major repair or major alteration for products that are not produced under an FAA approval, provided the work was performed in

accordance with instructions developed by the manufacturer or a person acceptable to the FAA.

14 CFR § 65.95

- (a) The holder of an inspection authorization may--
 - (1) Inspect and approve for return to service any aircraft or related part or appliance (except any aircraft maintained in accordance with a continuous airworthiness program under part 121 of this chapter) after a major repair or major alteration to it in accordance with part 43 [New] of this chapter, if the work was done in accordance with technical data approved by the Administrator; and
 - (2) Perform an annual, or perform or supervise a progressive inspection according to Sec. Sec. 43.13 and 43.15 of this chapter.
 - (b) When he exercises the privileges of an inspection authorization the holder shall keep it available for inspection by the aircraft owner, the mechanic submitting the aircraft, repair, or alteration for approval (if any), and shall present it upon the request of the Administrator or an authorized representative of the National Transportation Safety Board, or of any Federal, State, or local law enforcement officer.
 - (c) If the holder of an inspection authorization changes his fixed base of operation, he may not exercise the privileges of the authorization until he has notified the FAA Flight Standards District Office or International Field Office for the area in which the new base is located, in writing, of the change.
27. The sophisticated user defense shields manufacturers from liability arising out of dangers which a sophisticated user is presumed to appreciate because of their familiarity with the product.

Koken v. Black & Veatch Construction, Inc., 426 F.3d 39,46 (1st Cir. 2005) (“For example, the risk of vehicle accidents on the highway is well known, and drivers of commercial trucks are sophisticated users of their equipment. There is no duty to warn of the general risk of an accident, nor the possibility that operating a truck at a high rate of speed might cause an accident.”);

Carrel v. Nat’l Cord & Braid Corp., 447 Mass. 431, 2006 WL 2337595 (2006). (citing Hoffman v. Houghton Chem. Corp., 434 Mass. 624, 751 N.E. 2d 848 (2001)). See e.g., First Nat’l Bank & Trust Corp. v. American Eurocopter Corp., 378 F.3d 682 (7th Cir. 2004) (helicopter manufacturer granted summary judgment because professional pilots were sophisticated users/intermediaries); Emory v. McDonnell Douglas Corp., 148 F.3d 347 (4th Cir. 1998) (aircraft manufacturer granted summary judgment because the Navy and its pilots were sophisticated users); In re Air Crash Disaster v. Northwest Airlines, Inc., 86 F.3d 498 (6th Cir. 1996) (jury instruction which allowed jury to consider commercial airline’s level of sophistication for manufacturer’s sophisticated user defense

upheld); Johnston v. Hartford Ins. Co., 623 So. 2d 35 (La. App. Ct. 1993) (mechanics were sophisticated users); Ramsey v. Bell Helicopter Textron, 717 F. Supp. 1178 (E.D. La. 1989) (pilots were sophisticated users who were required to use visual inspections and pre-flight checks and procedures to ensure aircraft properly functioned).

28. The Sophisticated user defense allows a manufacturer to avoid liability for failing to warn of dangers which a sophisticated user was already aware or should have been aware because of their level of sophistication.

Carrel v. Nat'l Cord & Braid Corp., 447 Mass. 431, 2006 WL 2337595 (2006) (citing Hoffman v. Houghton Chem. Corp., 434 Mass. 624, 751 N.E. 2d 848 (2001). See e.g., First Nat'l Bank & Trust Corp. v. American Eurocopter Corp., 378 F.3d 682 (7th Cir. 2004) (helicopter manufacturer granted summary judgment because professional pilots were sophisticated users/intermediaries); Emory v. McDonnell Douglas Corp., 148 F.3d 347 (4th Cir. 1998) (aircraft manufacturer granted summary judgment because the Navy and its pilots were sophisticated users); In re Air Crash Disaster v. Northwest Airlines, Inc., 86 F.3d 498 (6th Cir. 1996) (jury instruction which allowed jury to consider commercial airline's level of sophistication for manufacturer's sophisticated user defense upheld); Johnston v. Hartford Ins. Co., 623 So. 2d 35 (La. App. Ct. 1993) (mechanics were sophisticated users); Ramsey v. Bell Helicopter Textron, 717 F. Supp. 1178 (E.D. La. 1989) (pilots were sophisticated users who were required to use visual inspections and pre-flight checks and procedures to ensure aircraft properly functioned).

NEGLIGENCE

29. In order to recover for negligence against the defendant, the plaintiffs must prove by a preponderance of the evidence three essential elements: (a) that the defendant owed a duty to the plaintiffs under all the circumstances; (b) that the defendant breached that duty; and (c) that the breach of that duty caused the injuries sustained by the plaintiffs.

Coons v. A.F. Chapman Corp., 2006 U.S. Dist. LEXIS 76817
Primus v. Galgano, 329 F.3d 236, 241 (1st Cir. 2003);
Beaver v. Costin, 352 Mass. 624, 626-27 (1967).

30. Unless you should find by a fair preponderance of the evidence that the accident which resulted in the injuries to the plaintiffs was reasonably foreseeable by the defendant, you must find for the defendant.

Coons v. A.F. Chapman Corp., 2006 U.S. Dist. LEXIS 76817
Buda v. Foley, 302 Mass. 411, 413-14, 19 N.E.2d 537, 538 (1939);
Veradt v. Steele, 337 Mass. 776, 153 N.E.2d 321 (1958).

31. The mere happening of an accident, no matter how tragic or damaging, in and of itself carries no presumption of negligence on the part of the defendant.

COMPARATIVE NEGLIGENCE

32. As to what constitutes comparative negligence, there is no substantial difference between "want or lack of due care" and "comparative negligence." Both terms refer to the kind and degree of care for his own safety that an ordinary reasonable man would exercise under the same circumstances. Care imports attention, heedfulness and caution.

O'Connor v. Hickey, 268 Mass. 454, 458-60, 167 N.E. 746, 746-47 (1929);
Gilman v. Deerfield, 81 Mass. 577, 580 (1860);
M.G.L. c. 231 § 85.

33. Care imports attention, heedfulness, caution; and to use or take any degree of care there must be some vigilance, some exercise of the faculties to preserve what it is desirable to save, or to avoid the danger or avert the peril to which a person may be exposed.

Gilman v. Deerfield, 81 Mass. 577, 580 (1860);
O'Connor v. Hickey, 268 Mass. 454, 460 (1929).

34. The law requires that a plaintiff act as a reasonable person would under the circumstances to avoid a foreseeable risk of harm. If you find that the plaintiffs did not exercise reasonable care for their own safety you must also find that they were negligent.

Cigna Insurance Co. v. Oy Saunatec, Ltd., 241 F.3d 1, 17 (1st Cir. 2001);
Correia v. Firestone Tire and Rubber Co., 388 Mass. 342, 355-56 (1986);
Allen v. Chance Manufacturing Co., 398 Mass. 32, 34 (1986).

35. Defendants are entitled to rely to a certain extent on the expectation that the plaintiffs will take reasonable care for their own safety.

Gagnon v. DiVittorio, 310 Mass. 475, 478 (1941).

36. The plaintiffs were obliged to take some active precautions for their own safety. No person has the right to put himself in an obvious place of danger, entirely trusting to the discretion of wisdom of someone else. There must be that exercise of reasonable care and caution on the part of the plaintiffs which you would naturally expect from a reasonably prudent person under the same/similar circumstances.

Tookmanian v. Fanning, 308 Mass. 162, 167 (1941).

37. The general rule is that the violation of a federal regulation is some evidence of negligence. The violation in and of itself does not mean that the defendant was negligent, but it is some evidence of negligence which you may consider along with all of the other evidence on that point. It is, of course, for you to decide whether there was such a violation in this case.

Commonwealth v. Campbell, 394 Mass. 77, 83 n.5, 474 N.E.2d 1062, 1067 n.5 (1985).

38. 14 CFR § 91.3

- (a) The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of that aircraft.
- (b) In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.
- (c) Each pilot in command who deviates from a rule under paragraph (b) of this section shall, upon the request of the Administrator, send a written report of that deviation to the Administrator.

39. 14 CFR § 91.7

- (a) No person may operate a civil aircraft unless it is in an airworthy condition.
- (b) The pilot in command of a civil aircraft is responsible for determining whether that aircraft is in condition for safe flight. The pilot in command shall discontinue the flight when unairworthy mechanical, electrical, or structural conditions occur.

NEGLIGENT DESIGN

40. The manufacturer is not bound to design an excellent or foolproof product. A manufacturer is only required to use reasonable care in the design of the product, taking into account the state of the art. A manufacturer is not liable if the product's design did not cause the plaintiffs' injuries.

Bogosian v. Mercedes-Benz of North America, Inc., 104 F.3d 472 (1st Cir. 1997);
Back v. Wickes Corp., 375 Mass. 633, 640, 378 N.E.2d 964, 969 (1978).

41. A designer is not required to design the safest possible product or to design against all possible risks and imaginable dangers, however remote.

Torre v. Harris-Seybold Co., 9 Mass. App. Ct. 660, 678 (1980).

42. The issue in a design negligence case is not whether a safer alternative design was available but whether the manufacturer exercised reasonable care to design out avoidable dangers.

Cigna Ins. Co. v. Oy Saunatec, Ltd., 241 F.3d 1, 15 (1st Cir. 2001);
Uloth v. City Tank Corp., 376 Mass. 874, 878, 384 N.E.2d 118, 119 (1978);
DoCanto v. Ametek, Inc., 367 Mass. 776, 782, 328 N.E.2d 873, 876 (1975).

43. The law requires a person who designs a product to use the knowledge and skill of a reasonable person in the same circumstances.

Tibbetts v. Ford Motor Co., 4 Mass.App. 738, 740 (1976);
Pignone v. Santa Anita Mfg. Corp., 17 Mass.App. 944 (1983);

Smith v. Arlens Co., 375 Mass. 620, 624 (1978);
Back v. Wickes Corp., 325 Mass. 633, 643, 378 N.E.2d 964, 970 (1978).

44. Deliberate misuse of a product is a complete defense to a negligent design claim.

Venezia v. Miller Brewing Co., 626 F.2d 188, 191 n. 3 (1st Cir. 1980)
Bolduc v. Martin, 968 F.Supp. 16, 18 (D.Mass. 1997).

45. In deciding whether a “defect” exists in the design of this product, you must weigh competing factors and consider the gravity of the danger posed by the challenged design, the likelihood that such danger would occur, the mechanical feasibility of safer alternative designs, the financial cost of an improved design, and the adverse consequences to the pilot and any and all factors relative to the usefulness of the aircraft. These factors are relative and none of those determinations can be made in a vacuum. Particularly when considering the gravity of the danger posed by the challenged design and the likelihood that the danger would come to pass. You are to consider the environment in which the aircraft is used by pilots and not just the design itself.

Back v. Wickes Corp., 375 Mass. 633, 642 (1978);
Nascimento et al v. Ford Motor Co., 1993 Mass. Super. LEXIS 82 (Mass. Super. Ct. April 12, 1993) (McHugh, J.)

BREACH OF WARRANTY

46. In order to prevail on the claim that the defendant breached the implied warranty of merchantability, the plaintiffs have the burden of proving four essential elements of the claim. The plaintiffs must prove each element by a preponderance of the evidence.

First, the plaintiffs must prove that the defendant manufactured and sold the product in question. Second, the plaintiffs must prove that at the time of their injuries, they were the people whom the manufacturer might reasonably have expected to use, consume or be affected by the product in a manner that the defendant intended or reasonably could have foreseen. Third, the plaintiffs must prove that a defective condition rendering the product unreasonably dangerous existed at the time the product left the hands of the defendant, so that the product was not reasonably suitable for the ordinary uses for which goods of that description were sold. Fourth, the plaintiffs must prove that the defective condition which existed at the time of the sale of the product was a cause of their injuries.

Coons v. A.F. Chapman Corp., 2006 U.S. Dist. LEXIS 76817
Smith v. Ariens Co., 375 Mass. 620, 623, 377 N.E.2d 954, 956 (1978);
Allen v. Chance Mfg. Co., 398 Mass. 32, 34, 494 N.E.2d 1324, 1326 (1986);
Cocco v. Deluxe Sys., Inc., 25 Mass. App. Ct. 151, 153-54, 516 N.E.2d 1171, 1172 (1997);
Fernandes v. Union Bookbinding Co., Inc., 400 Mass. 27, 37, 507 N.E.2d 728, 734 (1987).

47. In order for the plaintiffs to prevail in their action for breach of warranty, they must demonstrate that the defendant's aircraft was not reasonably suited for the ordinary purposes for which it was sold, that it was defective, and that defect existed at the time of the sale and proximately caused the damages complained of.

Gillespie v. Sears, Roebuck & Co., 386 F.3d 21, 26 (1st Cir. 2004);
Mead v. Coca Cola Bottling Co., 329 Mass. 440, 442 (1952);
Harrod v. Edward E. Tower Cou, 346 Mass. 726, 729 (1963).

48. Plaintiffs have the burden of proving to your satisfaction that it is more likely than not that the defendant breached a warranty by designing and selling a defectively-designed aircraft. A defect is a physical characteristic that makes a product unreasonably dangerous by reason of the foreseeability of harm resulting from that defect.

Sultis v. General Motors Corp., 690 F.Supp. 100, 101 (D.Mass. 1988) (Keeton, J.).

49. A merchant seller warrants that his goods are merchantable when properly used. However, you must remember that warranty liability is not absolute liability, and the seller does not warrant that his product is accident proof.

Back v. Wickes Corp., 375 Mass. 633, 640, 378 N.E.2d 964, 969 (1978).

MISUSE

50. The defendant in this case is not liable for consequences of the unforeseeable misuse of the subject aircraft.

Cigna Insurance Co. v. Oy Saunatec, Ltd., 241 F.3d 1, 18 (1st Cir. 2001);
Back v. Wickes Corp., 375 Mass. 633, 640 (1978).

51. It was not necessary for Raytheon to specifically design against a pilot's or mechanic's carelessness unless the plaintiffs can show that an alternative design for this aircraft was available that met all other needs and, in addition, could be made foolproof at a reasonable cost.

Kolter v. Am. Tobacco Co., 926 F.2d 1217, 1225 (1st Cir. 1990).

FORESEEABILITY

52. The defendant was not bound to foresee and warn against events which were apparently impossible or highly improbable. Warranty liability is not absolute liability. A manufacturer must design only against the reasonable foreseeable risks attending the product's use. The manufacturer is not bound to design an excellent or foolproof product. A manufacturer is required only to use reasonable care in the design of the product, taking into account the state of the art.

Cigna Ins. Co. v. Oy Saunatec, Ltd., 241 F.3d 1, 15 (1st Cir. 2001);

Bogosian v. Mercedes-Benz of North America, Inc., 104 F.3d 472 (1st Cir. 1997);
Back v. Wickes Corp., 375 Mass. 633, 640, 378 N.E.2d 964, 969 (1978);
Venezia v. Miller Brewing Co., 626 F.2d 188, 190-92 (1st Cir. 1980).

53. Any legal duty owed by the defendant, Raytheon, existed only to the extent that the defendant could reasonably foresee the risk of injury to people such as the plaintiffs.

Fries v. Boston Console Gas Co., 324 Mass. 623, 627, 88 N.E.2d 1, 8-9 (1949);
Ricciutti v. Sylvania Elec. Products, Inc., 343 Mass. 347, 352-53, 178 N.E.2d 857, 861 (1961).

WARNINGS

54. A manufacturer does not have to warn of known or obvious precautions to be taken in the use of its product. There is no duty to give additional warnings of potential difficulties to someone who already knows of the hazards which may arise from the use of the product.

Coons v. A.F. Chapman Corp., 2006 U.S. Dist. LEXIS 76817
Fiorentino v. A.E. Staley Mfg. Co., 11 Mass. App. Ct. 428, 436, 416 N.E.2d 998, 1004 (1981).

55. A manufacturer has no duty to warn users of a possible risk that is not associated with a foreseeable use or misuse of the product.

Mitchell v. Skyclimber, Inc., 396 Mass. 629, 632, 487 N.E.2d 1374, 1376 (1986).

56. In order for the plaintiff to recover on a theory of breach of warranty for failure by the defendant to warn of a dangerous condition, the plaintiffs must show that a warning would reduce the likelihood of injury. Breach of warranty for failure to warn is not the proximate cause of an injury when a warning would not eliminate the possibility of injuries. If the injuries to the plaintiffs in the case before you was due to the carelessness, reckless haste, momentary inadvertence or forgetfulness of one other than the defendant, then the plaintiffs cannot recover on a theory of failure to warn.

Billiar v. Minnesota Mining & Mfg. Co., 623 F.2d 240, 246 (2d Cir. 1980).

57. In some circumstances, a warning may be superfluous and may not reduce the likelihood of injury. Where the danger presented by the use of the product is obvious, and a warning would not reduce the likelihood of injury, the manufacturer has no duty to warn of such a danger.

Uloth v. City Tank Corporation, 376 Mass. 874, 881, 384 N.E.2d 1188, 1192-93 (1978);
Colter v. Barber-Greene Co., 403 Mass. 50, 59, 525 N.E.2d 1305, 1312 (1988);
Carleson v. American Safety Equipment Corp., 528 F.2d 384, 387 (1st Cir. 1976).

58. If you find that the plaintiffs knew the danger inherent with the use of the defendant's aircraft, you must then find that the defendant had no duty to warn the plaintiffs of this obvious danger.

Colter v. Barber-Greene Co., 403 Mass. 50, 59, 525 N.E.2d 1305, 1312 (1988);
Laaperi v. Sears, Roebuck & Co., 787 F.2d 726, 728-29, n.1 (1st Cir. 1986) (no negligence duty to warn where users ought to realize product's dangerous condition).

59. If the end user was, or should have been, aware of the dangers with the product, then any warning pertaining to those dangers is superfluous and not required by Massachusetts law.

Carrel v. Nat'l Cord & Braid Corp., 447 Mass. 431, 2006 WL 2337595 (2006); Johnston v. Hartford Ins. Co., 623 So. 2d 35 (La. App. Ct. 1993).

60. Failure to warn will not constitute negligence if it is not the proximate cause of the plaintiff's injuries.

Wayslow v. Glock Inc., 975 F.Supp. 370, 378 (D. Mass 1996) citing, Laaperi v. Sears Roebuck & Co., 787 F.2d 726, 729 (1st Cir. 1986). See also, Jackson v. United States of America, 983 F. Supp. 273 (D. Mass. 1997) (failure to warn was not proximate cause of accident because pilot knew of dangers); Vadala v. Teledyne Industries, Inc., 44 F.3d 36 (1st Cir. 1995) (evidence failed to establish that airplane crash was caused by actions of manufacturer).

SUPERSEDING CAUSE

61. You must find that defendant is not liable if you find that any negligence or breach of warranty of the defendant was superseded by the intervening negligence of a third person.

By a superseding cause, I mean the unforeseeable negligence of someone other than the defendant which becomes the real cause of the plaintiffs' damages, and which brings them about regardless of any negligence on the part of the defendant.

Staelens v. Dobert, 318 F.3d 77, 79 (1st Cir. 2003);
H.P. Hood and Sons, Inc. v. Ford Motor Co., 370 Mass. 69, 76 (1976);
Solimene v. B. Grauel, 399 Mass. 790, 796 (1987).

14 C.F.R. §91.3

- (a) The pilot in command of an aircraft is directly responsible for, and is the final authority as to, the operation of the aircraft.
- (b) In an in-flight emergency requiring immediate action, the pilot in command may deviate from any rule of this part to the extent required to meet that emergency.

CAUSATION

62. One of the elements which the plaintiffs must provide with respect to each of their claims against the defendant is that the defendant's acts were the proximate cause of the plaintiffs' injuries. Proximate cause is the active efficient cause that sets in motion a train of events which brings about a result without the intervention of any force started and working actually from a new and independent source.

Hayes v. Douglas Dynamics Inc., 8 F.3d 88, 89 (1st Cir. 1993);

Bishop, 17 Massachusetts Practice, §534. "The proximate cause is that which is a continuous sequence, unbroken by any new cause, proceeding an event, and without which the event would not have occurred." Wallace v. Ludwig, 292 Mass. 251, 254 (1935).

63. If on all the credible evidence you find that it is just as reasonable to believe that the cause of the plaintiffs' alleged injuries are ones for which no liability would attach to the defendant, then the plaintiffs have failed to sustain their burden of proof and you must find for the defendant.

Morris v. Weene, 258 Mass. 178, 180, 154 N.E. 860 (1927).

64. An act or omission on the part of the defendant will not provide grounds for relief unless the plaintiffs prove that the act or omission was a proximate cause in bringing about the plaintiffs' injuries.

Delta Air Lines, Inc. v. United States, 561 F.2d 381, 394 (1st Cir. 1977), cert. den. 434 U.S. 1064.

Williams v. Fontes, 9 Mass. App. Ct. 882, 883 (1980).

65. If you find that the conduct of someone other than defendant was the sole proximate cause of the plaintiffs' accident, then you must return a verdict for defendant. This conduct may be the negligence of the plaintiffs.

Hayes v. Douglas Dynamics Inc., 8 F.3d 88, 89 (1st Cir. 1993).

Williams v. Fontes, 9 Mass. App. Ct. 882, 883 (1980).

DAMAGES

66. Damages must be proved and not left to speculation.

Snelling & Snelling of Massachusetts, Inc. v. Wall, 345 Mass. 634, 636 (1963).

67. The plaintiffs have the burden of proving their damages in this action. They may only recover for damages proximately caused by the defendant.

Dolan v. Suffolk Franklin Savings Bank, 355 Mass. 665, 670 (1969).

68. Damages must be reasonable, fair, and just. If you find the plaintiffs are entitled to a verdict, you may award them only such damages as will reasonably compensate them for such injury and damages as you find, from the preponderance of the evidence in this case, that they have sustained as a proximate result of injury caused by negligence or breach of warranty of the defendant.

69. In assessing damages for any loss of reasonable expected net income because of the deaths of Mr. Steven Dean and Mr. Scott A. Knabe, you should reduce these damages by the amount of the income taxes on the plaintiffs' estimated future earnings, and then reduce these damages by the expected personal consumption of Mr. Steven Dean and Mr. Scott A. Knabe.

Kennett v. Delta Air Lines, 560 F.2 456 (1977)

M.G.L. c. 229 § 2

Norfolk and Western Railway Company v. Liepelt, 444 U.S. 490, 494 reh. den. 445 U.S. 972 (1980).

70. In assessing damages for any future losses of the plaintiffs, you should not consider possible future inflationary trends.

Williams v. United States, 435 F.2d 804, 807 (1st Cir. 1970);

71. In assessing damages for any future losses of the plaintiffs, the law requires you to reduce these future damages to their "present value" to allow for the interest that will be earned on any verdict rendered today. You must consider the interest that will be earned in the future, and reduce any verdict accordingly, so that the plaintiffs will not recover more than the just compensation you determine.

Griffin v. General Motors Corp. 380 Mass. 362, 367, 403 N.E.2d. 402, 406 (1980).

72. Any award of damages to the plaintiffs are exempt from either Federal or State income tax, and you therefore are to award only the amount of damages as will reasonably compensate the plaintiffs. You are not to include in your verdict any compensation for any amount of Federal or State taxes.

Norfolk and Western Railway Company v. Liepelt, 444 U.S. 490, 502-03 reh. den. 445 U.S. 972 (1980);

Griffin v. General Motors Corp., 380 Mass. 362, 367-370 (1980).

73. Any award of damages do not include any assertion or claim for such things as grief, anguish, sadness or bereavement of any of the survivors of the decedents and therefore are not to be included or considered in any award of damages should you reach that issue.

Mitchell v. United States, 141 F.3d 8, 21 (1st Cir.1998);

DaSilva v. American Brands, Inc., 845 F.2d 356, 362 (1st Cir. 1988);

MacQuish v. Volkswagon A.G., 22 Mass. App. Ct. 380, 393-98 (1986) affirmed 400 Mass. 1003 (1987).

74. Any award of damages for emotional distress and anxiety must show proof that plaintiffs sustained actual physical harm from defendants' conduct. Without such proof, negligent infliction of emotional distress is not to be included or considered in any award of damages should you reach that issue.

Rodriguez v. Cambridge Housing Authority, 443 Mass. 697 (2005)

Sullivan v. Boston Gas Company, 414 Mass. 129 (1993)

Payton v. Abbot Labs, 386 Mass. 540, 547 (1982)

Santuna v. Registrars of Voters, 398 Mass. 862, 867 (1986) ("a person cannot recover for negligently caused emotional distress absent physical injuries").

75. Plaintiff Weiler is not entitled to any damages other than those damages to which she may be entitled in her capacity as administratrix for the estate of Scott Knabe.

Fitzsimmons v. Mini Coach of Boston, Inc., 440 Mass. 1028, 799 N.E. 2d 1256 (2003);

Feliciano v. Rosemar Silver Co., 401 Mass. 141, 514 N.E. 2d 1095 (1987).

76. If you award damages, you are not to include any amount for interest. The law automatically provides for interest on any damages awards from the date of the commencement of the lawsuit, and such calculations are not for the jury.

77. In determining whether or not the plaintiffs caused their own injuries, you may consider their actions in light of their background, education, experience (including work experience) and knowledge as it relates to their actions.

DeMartin v. New York, New Haven & Hartford Railroad Co., 336 Mass. 261, 267 (1957);

Campbell v. Rockland Trust Co., 311 Mass. 663, 666 (1942).

I hereby certify that this document(s) filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non registered participants on January 30, 2007.

/s/ Peter C. Knight

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